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Observe American Education Week - November 17-23

SCHOOL LIFE

Volume X
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October, 1924

IF WE WORK UPON MARBLE, IT WILL PERISH; IF WE WORK UPON BRASS, TIME WILL EFFACE IT; IF WE REAR TEMPLES, THEY WILL CRUMBLE INTO DUST; BUT IF WE WORK UPON IMMORTAL SOULS, IF WE IMBUE THEM WITH PRINCIPLES, WITH THE FEAR OF GOD AND LOVE OF FELLOW MEN, WE ENGRAVE ON THOSE TABLETS SOMETHING WHICH BRIGHTENS ALL ETERNITY.—*Daniel Webster.*

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TO OBSERVE American Education Week appropriately requires active preparation. It is not always easy to devise effective methods or to find suitable material. Repeated requests have been made upon the Bureau of Education for suggestions as to what to do and where to obtain the necessary literature. In response to such requests the following documents have been issued. They may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D. C., at the prices stated: (1) "Suggestions." Price, 5 cents; in lots of 100 or more, 2 cents each. (2) "Broadside," with material suitable for newspaper articles, addresses, etc. Price, 5 cents; in lots of 100 or more, 1 cent each. (3) "The Quest of Youth," a historical pageant. Price 10 cents; in lots of 100 or more, 6 cents each. (4) "School and Teacher Day," an illustrated folder. Price 5 cents; in quantity, 75 cents per hundred. Additional copies of this number of SCHOOL LIFE may be purchased at 5 cents each.

THE AMERICAN LEGION and the National Education Association are joint sponsors with the United States Bureau of Education in promoting American Education Week. Local and national officers of the American Legion should be consulted freely by school officers who are planning to observe the occasion.

The October and November numbers of the Journal of the National Education Association will contain many appropriate articles, and in addition the Association will publish a "research bulletin" entitled "Facts on the Public Schools for American Education Week." Information concerning these publications may be obtained from Dr. J. W. Crabtree, Secretary, 1201 Sixteenth Street, Washington, D. C.

AN INDEX TO SCHOOL LIFE, Volume IX, September, 1923, to June, 1924, has been issued, and it may be obtained without charge upon application to the Commissioner of Education, Washington, D. C., as long as the supply lasts.

SCHOOL LIFE

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Secretary of the Interior, HUBERT WORK - - - Commissioner of Education, JOHN JAMES TIGERT

VOL. X

WASHINGTON, D. C., OCTOBER, 1924

No. 2

Trained Minds Are Sources of Untold Benefit to All Mankind

University Research Has Revolutionized American Agriculture. Fumes From Smelters Transformed to Save Instead of Ruining Industries. Success of Lighter-than-Air Craft Assured by Discovery of Abundant Sources of Helium. Out of Universities Have Come Discoveries in Medicine that Removed Obstacles to Prosperous Civilization. Value of Achievements in Chemistry Beyond Computation

By JAMES F. ABEL

Assistant Specialist in Rural Education, Bureau of Education

EDUCATION pays both the individual and society. Trained minds are sources of wealth in endless ways. They create, discover, invent. They save labor, material, time, and land. They lessen the waste of disease, deterioration, and decay. They produce more serviceable and attractive articles and help to make life more complete and happy.

The public and private universities of America have received about four billions of dollars in bequests, gifts, and appropriations. They are returning to humanity every year in skilled workers and in the discovery of scientific truths that benefit all mankind certainly 100 per cent on the total of all the money ever used by them.

Colleges Actually Developed Science of Agriculture

Our annual production of crops has been increased immeasurably by discoveries made by men working in agricultural colleges and experimental stations. Stephen M. Babcock, while in the University of Wisconsin, invented the milk tester to determine accurately the per cent of butterfat in milk. It revolutionized dairying and really made the great dairy industry possible. Doctor Babcock gave his invention free to the public, though he could easily have made a fortune from it. Charles E. Saunders, of the Ontario Agricultural College, created Marquis wheat, a high-yielding, resistant variety that is grown over most of the northern section of the United States and southern Canada. Albert Dickens and L. E. Coll, of the Kansas State Agricultural College, created Kansas red wheat, a kind very resistant to rust

and one that has greatly increased the yield of the fields of the southern plains.

Keeping up the fertility of soils largely through rotation of crops owes much of its development to Dr. C. G. Hopkins, of the University of Illinois. His vision of worn-out soils restored to fertility and agricultural areas of the earth never depleted is now recognized as a possibility. Large areas of alkali land have been made productive through methods devised by Dr. E. W. Hilgard, a worker in the University of California.

Worth More Than Entire Cost of Education

The United States is the greatest fruit-producing nation of the world largely because Doctor Bailey, of Cornell, organized and brought to bear the principles of science on horticultural problems. The pioneer work in using arsenic compounds to protect fruit from injurious insects was done by H. A. Cook, in the University of Michigan. While at the University of Illinois Doctor Burrill discovered the cause of pear blight, which led to finding the causes of many other plant diseases and subsequently to methods of prevention or cure. Dr. E. D. Ball, of the University of Utah, practically saved the apple industry of the West by initiating the driving method of applying sprays to kill the codling moth. Prof. Wilmont Newell, of the Agricultural College of Louisiana, first made use of lead arsenate in successfully combating the boll weevil. These are only a few of the remarkable achievements of university men in the field of agriculture. The honor roll is a long one, and the wealth that has been

produced because of their work would more than pay for all our schools.

In mining the story is no less wonderful. Much of it reads like a romance. The universities provide housing and library and laboratory facilities for 11 of the 13 Federal mining experiment stations. Dr. F. G. Cottrell, while assistant professor of physical chemistry in the University of California, developed the idea of electrical precipitation of dusts. His main purpose was to remove from smelter fumes the poisons that were killing the plant life near the large smelters and causing endless litigation, trouble, and expense. His principle, when applied to the smelters, not only did that but saved considerable amounts of gold, silver, and other metals. The arsenic procured in this way is sold in large quantities as an insecticide to save the plants it would have destroyed.

Cement Kilns Fertilize, Not Destroy, Oranges

Cement kilns in southern California were almost compelled to close because the dust from them was damaging the oranges. By the use of Doctor Cottrell's discovery the dust was precipitated and potash taken from it to fertilize the land in the orange orchards. In these cases by-products were turned into valuable aids for the very things to which they were most harmful. By the application of Cottrell's principle of electrification to the oil industry more than \$100,000,000 worth of oil is saved annually from otherwise worthless oil emulsions. Doctor Cottrell patented his discoveries, but he assigned the patents to the Smithsonian Institution.

and the royalties from them are used to pay the expenses of further research by a foundation formed for that purpose.

C. E. Williams, working in the mining experiment station of the University of Washington, developed an electrical process for making synthetic gray iron from scraps of thin steel, a waste of automobile factories. Those scraps were worth \$4 a ton. Saved and made into gray iron they have a value of about \$75 a ton to the auto factories themselves for making castings.

University Professors Aid National Government

The success of the large lighter-than-air craft is almost wholly dependent upon the use of helium because it is a non-explosive gas, and though the initial cost is greater it is in the long run less expensive than hydrogen. Professor Cady, of the University of Kansas, discovered that there was a considerable supply of helium in the natural gases of that State. His report to the National Government led it to call on several other university professors for investigations, and the result is the discovery of sources of supply and methods of production that make possible the maintenance of the *Shenandoah* and any other large aircraft that we may wish to have.

Edward Orton, jr., a professor in the University of Ohio, is known to the mining world as the father of modern ceramics in the United States. Before he began his work, making brick, tile, pottery, etc., was largely a matter of guess. The industry had little or no scientific foundation. He took the lead in the careful study of the processes of ceramics and so established its principles that we now have a number of schools training men for that work. The traveling laboratory from the University of Ohio made tests of actual work in ceramic plants and suggested changes that in nine months paid in the saving of fuel alone the entire cost of the testing trip.

During the war Professor Gibbs, of Columbia University, devised an oxygen-breathing apparatus for use in mine rescue work. Modifications of it have been adopted by fire departments and in submarines. The consequent saving of life and property has been enormous.

Methods of Science Save Coal and Oil

Processes of washing coal have been worked out in the Universities of Washington and Illinois, and in a single instance 200,000 tons of coal were saved from what would have been nothing but waste. The oils found in western Ohio, Indiana, and Texas were sulphur bearing and of low value until Doctor Mabry, of the Case School of Applied Science, found ways of refining them, and making

them as useful as the high-grade oils of Pennsylvania and eastern Ohio.

As for geology, the university professors have done a major part of the work, and some of them rank among the highest in that field of science. Talk to any geologist and he will name offhand a dozen or more "splendid fellows" who occupied chairs in universities and not only endeared themselves to their students by their fine classroom work but joined in geological investigation and made inestimably valuable contributions in research and writing.

T. C. Chamberlin, for five years president of the University of Wisconsin, and later in charge of the geological department of the University of Chicago, studied modern glaciers, published much new material on the glacial deposits of the Northeastern States, was geologist of the Peary Arctic relief expedition, and formulated the planetesimal hypothesis as an explanation of the origin of the planetary system.

Reduce Pure Science to Practical Uses

Louis Agassiz, professor of natural history at Harvard, contributed as only a small part of his work the theory of the glacial epoch, and by studies in the Alps, confirmed his generalizations in regard to it.

Joseph Le Conte, one of the long list of noted men whom Agassiz trained, while professor in the University of California did more perhaps than any other one man to popularize geology in America and hasten its translation into the everyday life and thought of people.

James Dwight Dana, professor of natural history at Yale, was a member of the Wilkes exploring expedition sent by the National Government to little-known parts of the Pacific Ocean and later gave 13 years to almost constant study of the materials collected. He wrote several texts on geology and mineralogy, and his discussions of the origin of the continents, mountain building, and volcanoes are among the most valuable contributions to scientific literature.

Benjamin Silliman, for 62 years a professor of natural science at Yale, was one of the foremost lecturers of the world, especially on geology. He, with Doctor Hare, constructed the compound blowpipe. He established the *American Journal of Science*, and members of his family held the editorship of it for years.

Geology the Handmaid of Mineral Development

John Branner, professor of geology at the University of Indiana, and later vice president of Stanford University, was for six years State geologist of Arkansas and did an important work in developing the mineral wealth of the State. He directed two geological expeditions to Brazil and

was special assistant in a geological survey of that country.

Organized Effort Essential in Medical Advance

Though many of the important early discoveries in medicine were made by individuals working independently, the great continuous advance in medical science in the past 90 years has been made by organized laboratory effort, most of it carried on in the universities of Europe and America. Individuals as a rule have not the means or equipment to do research in medicine. They must work in the universities or with some of the various foundations. The latter have excited the rivalry and stimulated the effort of the medical schools; States and cities have always felt at liberty to call on universities for help in medical problems; and the public demands university leadership and advice in the health affairs of the community. Out of the universities have come discoveries in medicine that have removed some of the greatest obstacles to higher and more prosperous civilization.

The story of Professor Pasteur's brilliant discoveries has no parallel in any science. He studied tartaric acid and opened a new field of crystallography; demonstrated the reasons for fermentation of alcohol, vinegar, lactic acid, and butyric acid, found the causes of disease by germ infection, and explained the principle of cure or prevention by vaccination. He saved the silk industry of France by overcoming a germ disease of the silkworms, put its wine industry on a scientific basis by Pasteurization, and through vaccination for anthrax is credited with a money value saving in the livestock of France sufficient to cover the war indemnity paid by France to Germany in 1879. All canning and preserving is based on his discoveries. Civilization's debt to this professor of chemistry at Lille is almost beyond imagination.

Modern Surgery Originated in University Laboratory

Another professor, Joseph Lister, of Edinburgh University, taking his idea from Pasteur's theory of germ infection, conceived the plan of keeping wounds free from infection by applying antiseptics. He is known as the founder of modern surgery, and the *British Medical Journal* said he saved more lives by the introduction of his system than all the wars of the nineteenth century together had sacrificed.

Emil Behring, a professor at the University of Halle, discovered the diphtheria antitoxin. By its use fatalities from diphtheria have been reduced from 45 per cent to less than 10 per cent, and one of the most dreaded diseases of childhood has been practically conquered.

Robert Koch, professor in the University of Berlin, discovered the tubercle bac-

cillus and the cholera spirillum. His work has done much to aid in the control of these and other diseases.

Among the more recent very valuable offerings of university professors is the prone-pressure method of artificial respiration developed by Prof. E. A. Schafer, of the University of Edinburgh. It is the best method known for reviving persons near death from drowning, electric shock, or asphyxiation, and has been the means of saving many lives.

Stimulated Breathing Saves Many Lives

For the treatment of these and related cases, Prof. Yandell Henderson, of Yale, has lately announced the plan of stimulating breathing by inhalation of a mixture of carbon dioxide and oxygen. It is known to be of great value in carbon monoxide or methyl alcohol poisoning and in hastening recovery from the effects of anesthetics.

When Dr. F. G. Banting wished to work out his theories regarding diabetes, he turned to his alma mater, the University of Toronto, and was given the help he needed in extracting insulin and proving its efficiency. Diabetes caused about 1½ per cent of all the deaths in the United States in 1921. It has been increasing rapidly in recent years, and its victims are usually young adults. Before the discovery of insulin by Doctors Banting and McLeod the only hope for the sufferer lay in a most rigid course of dieting. These two university men have already saved thousands of lives and returned many thousands more of invalids and semi-invalids to comparative health and usefulness. Here again is a contribution so great that there is no way of estimating it.

In the field of chemistry a single instance will serve to show something of university leadership and the debt we owe to it. Joseph Liebig, professor of chemistry at Giessen, made chemistry a real science and was the founder of organic chemistry. He discovered chloroform, chloral, and aldehyde. He was first to trace the transformation of inorganic to organic substances. Most of our work in soil study and fertilization is directly attributable to the results of his research.

Investigators of Only Five Classes Cited

It is not possible to compute in dollars and cents, pounds and pence, or in any other mere metal measure of value the wealth that has been produced because the few university professors mentioned lived and worked and gave freely to the world the best of their thought. And remember that these are only a very few names chosen more or less at random out of the very long list of high-grade university workers in only five fields of endeavor. If we were to try to tell all that the uni-

versities have done in all fields, it would be an attempt at multiplying the immeasurable.

Set aside for a minute consideration of what these great men of the universities have done and consider the value of education in the more ordinary walks of life. A study made at Cornell University shows that farmers with high-school training are tenants two years younger and farm owners four years younger than men trained only in elementary schools. Of 1,237 farmers in Kansas, those with a common-school education earned yearly \$422; those with high-school education, \$554; partial college education, \$859; complete college, \$1,452. The results of studies in nine other States were the same. The educated farmer earned more and lived better than the uneducated one.

Education Adds Greatly to Earning Power

A former president of the American Society of Engineers was authority for the statement some 10 years ago that 100,000 common laborers in Alabama were worth as producers about one million dollars; if trained in shops, more than one and one-half millions; if trained in trade schools, two and one-half millions; and if trained in technical colleges, nearly four and one-half millions. The Brooklyn Teachers' Association calculated in 1909 that for each day spent in school there was an added life income of between \$9 and \$10. Each day in school is now considered to be worth \$16 or \$17.

There is no use to argue further that education pays. Of course, it costs—all good things do—but it pays such enormous dividends in all sorts of ways that the wonder is we do not invest more money in it.

The United States Bureau of Education has been asked to conduct home economics conferences at the Bay section and at the Southern section of the California State Teachers' Association.

All-year schools have been discontinued in Newark, N. J. The attendance at summer sessions does not warrant the additional expense.

E DUCATION, to accomplish the ends of good government, should be universally diffused. Open the doors of the schoolhouse to all the children in the land. Let no man have the excuse of poverty for not educating his own offspring. Place the means of education within his reach, and if they remain in ignorance, be it his own reproach. . . On the diffusion of education among the people rests the preservation and perpetuation of our free institutions.—Daniel Webster.

Expenses for Education Relatively One-Third Less

Notwithstanding Rapidly Mounting Costs, Other Expenditures Have Surpassed Those for Education

IN SPITE of its rapidly mounting cost, education is receiving a noticeably smaller proportion of total governmental expenditures than formerly, declares Mabel Newcomer, of the Educational Finance Inquiry Commission, in "Financial Statistics of Public Education in the United States."

The percentage of total governmental expenditures devoted to education decreased from 17.6 per cent in 1910 to 11.8 per cent in 1920, or about one-third, Miss Newcomer states. The percentage of national governmental expenditures devoted to education decreased from 1.3 per cent to 1 per cent, or about one-fourth. In the same period the percentage of State governmental expenditures devoted to education decreased one-fifth. Only in the case of total local governmental expenditures did the percentage for education increase and then only one-ninth.

Highways Absorb Increasing Proportion of Expense

The best (because the largest) single item for comparison with the increasing educational costs is the cost of highways, says the author. The costs of education and highways, although increasing rapidly in amounts, together comprised only 19.8 per cent of the total governmental budget in 1920, as against 28.6 per cent in 1910 and 31.6 per cent in 1915. The cost for highways was increasing at a far greater rate than the cost for education. Of total State governmental expenditures, the percentage for education in 1920 had decreased to only four-fifths of what it had been in 1910, while the percentage for highways in 1920 had increased to five times what it was in 1910. Of total local governmental expenditures, the percentage for education increased about one-ninth from 1910 to 1920, while the percentage for highways increased only about one-thirtieth.

Of the per capita governmental expenditures, those for education and for highways in the country as a whole approximately doubled between 1910 and 1920, as did also State expenditures for education, local expenditures for education, and local expenditures for highways. The per capita for national expenditures for education and for highways, and for State expenditures for highways, increased at a much faster rate, the item for highways in both instances being far ahead of the corresponding item for education.

Reflections on Education in President Coolidge's Recent Addresses

"Do the Day's Work" Contains the Essence of Good Citizenship. Education in the Use of Leisure. Inculcation of Sound Ideals only Assurance Against Machinations of Extremists. Market for Trained Intelligence

Take up the Burden where It Is

WE are not all permitted the privilege of a university training. We can not all enter the professions. What is the great need of American citizenship? To my mind it is this, that each should take up the burden where he is. "Do the day's work" I have said, and it should be done in the remembrance that all work is dignified.—*At Howard University, Washington, June 6, 1924.*

Land of Wholesome Enjoyment and Perennial Gladness

I want to see all Americans have a reasonable amount of leisure. Then I want to see them educated to use such leisure for their own enjoyment and betterment, and the strengthening of the quality of their citizenship. We can go a long way in that direction by getting them out of doors and really interested in nature. We can make still further progress by engaging them in games and sports. Our country is a land of cultured men and women. It is a land of agriculture, of industries, of schools, and of places of religious worship. It is a land of varied climes and scenery, of mountain and plain, of lake and river. It is the American heritage. We must make it a land of vision, a land of work, of sincere striving for the good, but we must add to all these, in order to round out the full stature of the people, an ample effort to make it a land of wholesome enjoyment and perennial gladness.—*At National Conference on Outdoor Recreation, Washington, May 22, 1924.*

Obligation of Reasonableness and Moderation

If we accept this postulate of the eternal mutability of institutions, then we will be able to realize how great a service is that of the men and women who would train the youth of the Nation to understanding of and to interest in these institutions of ours. There is no greater obligation upon the community than that of properly educating its youth, of training its future citizens for the duties which in their time they must assume. The world has always contained a dangerously large proportion of people who have

believed that the way of progress was by way of destruction. They are commonly in a minority, but a distressingly active and determined minority. They would begin the reconstruction of human affairs by tearing down everything that has thus far been erected. It seems as if well-nigh every generation in modern times is destined to try some of these experiments in reorganization by the process of utter disorganization. The eagerness of the extremists, the revolutionists, is unquenchable. The only assurance against their machinations is to be found in the inculcation among the people of sound ideals of government. If we, in our generation, shall succeed in establishing among those who are to come after us the full conception of the obligation to reasonableness and to moderation, the next generation may find reason to thank us for making its way of life easier than ours has been. That, I take it, is the greatest collective wish of humanity in every generation, as it looks to the generations that are to follow.—*At the National Oratorical Contest, Washington, June 6, 1924.*

Greater Spirit of Loyalty an Urgent Need

We have all known people who were disposed to view with concern the rapid advance of education. They fear that when everybody is assured a measure of general education nobody will be left to look after the less agreeable tasks which must always be performed. Fortunately such misgivings have never been justified by the event. The advancement of intelligence has been marked by a continual elimination or amelioration of the more undesirable tasks. Just about the time when it is found that there is a shortage of workers willing to do unpleasant things somebody with a trained intelligence discovers a process or invents a machine that performs the task more efficiently, or makes its performance unnecessary. This has happened so many times that it seems safe to assume it will keep on happening. If there remain some undesirable tasks that neither science nor invention can eliminate, a more productive society will at least be able to pay more liberally—in fact, is now doing so—and thus get them done.

Such a continuing elimination of the uncomfortable tasks of course means a corresponding increase in human happiness. But this will not be possible unless intellectual progress keeps step with the demand for higher technical, scientific, and social capabilities. That is why the progress of education must always be a primary concern to us. The market for trained intelligence will never be overstocked. We hear of a possible saturation point in the demand for particular products; but there will never be a saturation point, a danger of overproduction, in good, working, capable brains. It may be that our educational methods are not so far perfected as to give us full returns on all our investments in them. No doubt some expensive college educations are invested in people incapable of making them return a going rate of interest. But that need not greatly worry us. The world keeps on increasing its wealth despite a deal of bad investments and sheer waste. No doubt it will keep on growing wiser if it continues to extend its educational processes, even though some mistakes mark the effort. * * *

I would not venture to say what our country needs most from its educated young men and women, but one of its urgent needs is a greater spirit of loyalty, which can only come from reverence for constituted authority, from faith in the things that are. There must be loyalty to the family; loyalty to the various civic organizations of society; loyalty to the Government, which means first of all the observance of its laws; and loyalty to religion. These are fundamental virtues. They are the chief characteristics of faith. If education has not given that clearer insight into all that touches our life, whether it come from our relationship to the physical world or our relationship to mankind, it will be a disappointment and a failure. If it has given that insight, it will be a success; it will be the source of that power through which alone has been, and can be, "wrought many wonderful works."—*At Georgetown University commencement, Washington, June 9, 1924.*

Eyesight of school children is neglected, according to a report of the Eye Sight Conservation Council of America, which states that only 4,227,702 of the 24,000,000 school children of the United States received eye tests in 1923. Children in city schools are receiving more attention than those in the rural districts.

The attorney general of New Mexico has ruled that the section in the new school code providing for appointment of county superintendents by the county boards of education is unconstitutional.

Possibilities of Summer Camps for Children Beginning to Appear

Most Important Step in Education that America Has Given to the World. Experience Expands the Mind as Exercise Develops the Body. Massachusetts Legislature Has Authorized Expenditure of Public Money for Health Camps. Sunshine in Childhood Better than Sanitariums in Mature Life

By MARIE M. READY

Assistant Specialist in Physical Education, United States Bureau of Education

"THE organized summer camp is the most important step in education that America has given to the world." President-Emeritus Eliot, of Harvard University has said it, and the children who have enjoyed its pleasures and benefits agree with him without reservation. They have learned the joy

than 500 private camps throughout the country where children may spend a summer vacation.

The State legislators of Massachusetts recently passed a bill allowing cities to spend money for establishing health camps and the State department of education at Boston has under consideration a plan

with the idea that if plenty of sunshine and fresh air and proper food are given to sickly children the cost will be much less than that of sanitariums for the same individuals when they become adults.

Mattapan, South Braintree, Lowell, Springfield, and Malden, Mass., have experimented along this line for several years. The cost of the work has been met by various local organizations interested in child welfare. At the camps in these places the children have been wearing only bathing suits and taking sun baths for treatment. They have had careful supervision by nurses and their recreation has been supervised so that their play was not too tiring. This experimental work has proved beyond a doubt that an outdoor life is a health producer. The average child gains a pound a week, while the average germ, dizzy with fresh air and sunshine, must either hunt a dark hole or commit suicide.

A place which offers a great number and variety of camps is the Palisades Inter-State Park at Bear Mountain, N. Y. In 40 miles square of park domain there are between 15 and 20 mountains ranging in elevation from 1,200 to 1,400 feet and many others are more than 1,000 feet high. "This is a wilderness of wooded mountains touched by human genius to conserve its wildwood aspects and to utilize them for well-directed purposes of



Teaching methods of resuscitation at Camp Bradley, Md.

of climbing hills, exploring forests, swimming in lakes and streams. They have seen wonderful clear colored sunsets, unmarred by city dust or smoke. They have been out in the open and have felt the joy of stretching their minds, which can only be compared with the relaxation one gets from stretching his body. They have experienced a wonderful feeling when climbing a mountain and realized that each step upward gave a larger horizon for the eye and a wider outlook for the mind.

Educators have long appreciated the immense value of the organized summer camps, but little has yet been done to link them with the public-school systems. Many, however, are operated as community charities, some by health boards, others by organizations like the Boy Scouts, Girl Scouts, Camp-Fire Girls, Young Women's Christian Association, and Young Men's Christian Association, Sunday schools, and churches. A few cities have established camps for their underweight children. There are more

for placing in summer camps all the underweight children of the State within 10 years. At present Massachusetts probably leads in health camps, and many cities have established these camps



A camp hut in Palisades Interstate Park, New York

rational recreation and education." Over 100 species of birds live there in summer; a few deer remain; chipmunks are common; woodchucks, muskrats, and rabbits are numerous, and there is wonderful fishing. The purpose of the park is to promote health and recreation but at the same time to preserve the natural beauty of the region.

councillor, and few healthy councillors could put half as much enthusiasm into their work as did this lame boy.

In general the development of the Palisades Inter-State Park into camps for summer vacations is the work of Miss Ruby M. Joliffe, park commissioner. Miss Joliffe opened the first camp there in 1911, with 60 girls, and since then there

have been camps in Wisconsin, recreation camps in North Carolina, the municipal recreation camps of California and Michigan, and those in the national parks.

The summer camp movement is like a snowball rolling down a mountain side, gaining size and impetus each season. Every camper is a booster for camping, for he has learned that Mother Nature is a wonderful friend to all who make her acquaintance. She makes people over, giving them new souls and new bodies. She has an inexhaustible supply of good complexions, healthy appetites, good dispositions, and she proves this to all who visit her. Her benefits can not be delivered in C. O. D. packages to people staying in cities.



School Journeys a Feature of English Schools

So profitable and popular are school journeys in English schools that the teachers have formed a School Journey Association, 500 to 600 strong, which works with the board of education, the London County Council, and railways to promote this means of education.

Before a journey is undertaken a "guide book" is prepared for reference during the journey. This book includes a railway map and notes; geological notes and simple geological map; natural history notes; notes on the scenery and



A class in basketry at a Girl Scouts' camp

The buildings are made of chestnut trees. There is a system of reservoirs which supplies water for all the camps. Rowboats and canoes are placed on all the lakes. There is also a community kitchen which supplies cooked meals daily to the camps if ordered.

Among the organizations having camps here are the Scouts, Camp Fire Girls, Young Women's Christian Association, Young Men's Christian Association, Jewish Welfare, Catholic Welfare, and many churches and charity organizations. The New York City Association for the Blind has a camp here where a visitor sees a program very similar to that of other camps. The New York Life Insurance Co. has established a camp in this park where its employees may go for a vacation and restore their health.

There is also a camp for deaf and dumb children, called Camp Mendes. Mr. D. Kavow, the director, states that games are enjoyed only when the councillors enter into them with enthusiasm, but he noticed a great desire for carving, whittling, and nature study. There was one group of boys whose favorite occupation was looking for salamanders, turtles, and frogs. In this camp dramatics were out of the question except in pantomime.

In one of the welfare camps was a councillor who claims that he owes the use of one leg to swimming. Up to the age of 16 he could scarcely walk on account of infantile paralysis, but, having had a chance to try swimming, he improved greatly in the use of the lame leg. This young man was a nature study

has been constant development. During the past summer 8,000 children spent a summer in the organized camps, and there were numerous family camps besides. This park might well be studied and



A private recreation camp in the Tennessee Mountains

duplicated in other States. The only fault is that in general the children stay for too short a time. June and September would be a glorious time to live in the woods.

Camps in other parts of America might be mentioned, such as the boys' forestry

how it was made; architecture notes; notes on places of interest visited; music of grace and evening hymn; a register of marks for personal cleanliness, conduct, and observations, and a page for a detailed report on the child's use of the journey.

The Law of Life Is Interdependence

Community Day Offers Opportunity for Neighborliness, and "Neighbors" Embrace all Our Fellow Citizens

By JAMES F. ABEL

Assistant Specialist in Rural Education, Bureau of Education

REMEMBER that November 22 of American Education Week is "Community Day" and that its purpose is to help you to become better acquainted with your neighbor.

Your neighbor—the person who is near to you—what his pleasures are, how you can help him, and what you can learn from him, all must be a part of your life. For the law of life is interdependence. When we stop giving and receiving we stop living and growing. Time was when one's neighbors were those that lived near

Londoners Pay for Information Concerning Schools

Persons attending school in London outnumber the total population of Birmingham, the second largest city in Great Britain, according to one of a series of handbooks issued by the London County Council entitled "The Londoner's Education, Its History and Development." The London County Council educates 1,000,000 people, employs 30,000 teachers and officials, and expends £12,600,000 a year, this handbook states.

Aside from the contents, these handbooks themselves are of interest to municipal officials in America, for they are a novel method of bringing the activities of public officers to the attention of their constituents. The facts are in such attractive style and the illustra-

Needless To Waste Tears for the Unattainable

Children are Like Adults in Being Unwilling to Waste Their Efforts. Reasonableness of Decisions Must be Plain

By MARY G. WAITE

Assistant Specialist in Kindergarten Education, Bureau of Education

NO, TOMMY, you can't play with that glass bowl."

"Then I'll cry, Aunt Belle." And he did. He also kicked, bumped his head on the floor, stamped his foot, held his breath, pulled his hair. For an hour he did everything he had found successful with the invalid mother who was at that time in the hospital. But Aunt Belle was obdurate.

Then with blazing cheeks and tear-wet eyes he demanded, "Aunt Belle, tell me what I can do to make you let me." So Aunt Belle won the day.

As she was anxious to have Tommy's affection and respect as well as his obedience she told him some of the reasons why he could not play with everything he wanted in her house. She also talked with him of the probability that there would be things he wanted to do that he could not while he was under her care, and that when she said he could not there would be little use in his trying to make her say he could. So in all the weeks Tommy was with her there never was a question in his mind about trying it.

Like Tommy, all of us feel that many things are worth working for if there is any possible way of getting them, but if we know that they can not be had and see the reasons why they can not, we turn our attention to what we can have. We are not willing to waste our efforts. With children it is the same, but it is often hard to help them to see the reasonableness of adult decisions. Their limited experience makes it all the more necessary for them to feel this reasonableness in the people who have the responsibility of saying yes or no.



Los Angeles Children Taught Use of Books

Every child in Los Angeles upon entering the third grade is taught how to borrow books from the library and how to take care of books. The children's librarian visits each third-grade room and explains to the pupils the use of the library. Her aim is to arouse an interest in reading and teach the children to care for the books. Following this a letter is written to the parents urging their cooperation in the correct use of the library. In addition a leaflet, entitled "How to Borrow Books," is distributed among the library's patrons.



Girl scouts cheerfully perform the duties of camp life

him, had their homes within a few miles of his; but that is changed. Now you in Arizona may know from the morning paper what your neighbor in Maine was doing the day before. In a few hours the mail will carry your letter to him. In a few minutes the telegraph will take your message of news, cheer, or regret. You may talk to him by wire. You and he may listen at the same time to the concert by your community orchestra in Chicago. You may go quickly and easily to visit him.

Getting acquainted with your neighbor now means that you shall know, help, and live kindly with those with whom you mingle every day; and more than that, that you shall know and feel the life of all your neighbors, citizens of your nation. Science and invention have made it possible for you to have near by more than a hundred millions of people, and you are not measuring up to your own individual worth and dignity if you do not get acquainted with and take your part in both your smaller and your greater neighborhood.

tions and covers are so artistic that the pamphlets are actually sold at a profit from news stands all over the city. Besides education, pamphlets are issued covering public health, housing, parks and open spaces, and other subjects relating to public welfare.



Learn to Conduct Community Recreational Programs

At the Grange Community Leadership School, at Pennsylvania State College, August 21 to 27, demonstrations and talks were given in the planning and conducting of rural community programs, play and other social and recreational activities. Students of the course actually staged the plays, planned the stage lighting, and made the costumes, using only such equipment and facilities as are found in the ordinary rural community. One hour each day was given to talks by prominent rural leaders.



Art objects produced in five New York City schools exhibited in the Metropolitan Museum of Art

Exhibition of Drawings by New York Art Pupils

Drawings and designs made by pupils of five art schools of New York City were recently exhibited in the Metropolitan Museum of Art. Twenty examples of unusual excellence were contributed by each of the schools, namely, New York School of Fine and Applied Arts; Pratt Institute; School of Design and Liberal Arts; Teachers College, Columbia University; and Washington Irving School. All the work was done in the museum. The subjects of the drawings included, among other things, interior decoration, costume design, decorative panels, surface patterns for silks, ceramics, posters with illuminated text, and the drama.

Manage the Schools on Business Principles

A business enterprise can not be managed successfully unless the board of directors and the president have accurate and ample information regarding every department of the business. Likewise a school system, whether it be a village, county, or city system, can not be effectively managed unless the board of education and the superintendent of schools know all the facts and base their conclusion upon these facts.

So complex have city school systems become that city school superintendents can not themselves collect and compile the data needed for their own and the school board's guidance. As a consequence boards of education in many of the larger and some of the smaller cities have organized departments or bureaus of educational research to collect and compile data regarding practically every phase of their respective school systems.

About 50 city school boards report to the Bureau of Education that they have organized research departments.—W. S. Deffenbaugh.

THE GOOD EDUCATION of youth has been esteemed by wise men in all ages as the surest foundation of the happiness both of private families and of commonwealths. Almost all governments have therefore made it a principal object of their attention to establish and endow with proper revenues such seminaries of learning as might supply the succeeding age with men qualified to serve the public with honor to themselves and to their country.—Benjamin Franklin.

Farm Children are Attending High Schools

In the States of Maine, New Hampshire, North Dakota, Montana, and Oregon 3.15 per cent of the total farm population are enrolled in high schools as compared with 3.55 per cent for the nonfarm population. In three of the five States—Maine, New Hampshire, and Oregon—higher percentages of the farm population are enrolled in high school than in the nonfarm population. In these States it is significant that through centralization of high schools more than 80 per cent of all high schools serving farm children are comprehensive four-year high schools, while in the two States where lower percentages of the farm population are enrolled more than 50 per cent of all high schools serving farm children are small one, two, or three year high schools. Decidedly higher percentages of girls are enrolled from both farm and nonfarm groups. On an average the percentages of girls enrolled are more than one-third higher than for boys. If education is worth anything for productive work, either we must depend more and more upon our women to do the productive work of the world or we must find some solution for the problem of keeping our boys in school.—E. E. Windes.

The Consolidated School as the Community Center

The Rural Social Unit no Longer Confined to the School District. Modern Inventions Have Greatly Widened the Neighborhood. Parent-Teacher Associations an Important Element in Enlarging the Circle

By EDITH A. LATHROP

Assistant Specialist in Rural Education, Bureau of Education

FIFTY years ago the activities of the rural community centered about the district school. Often the building and sometimes the furniture was the product of cooperative labor. The debating society was the open forum for the neighborhood and the singing school was its song festival. In pioneer days the schoolhouse was often the religious as well as the literary center.

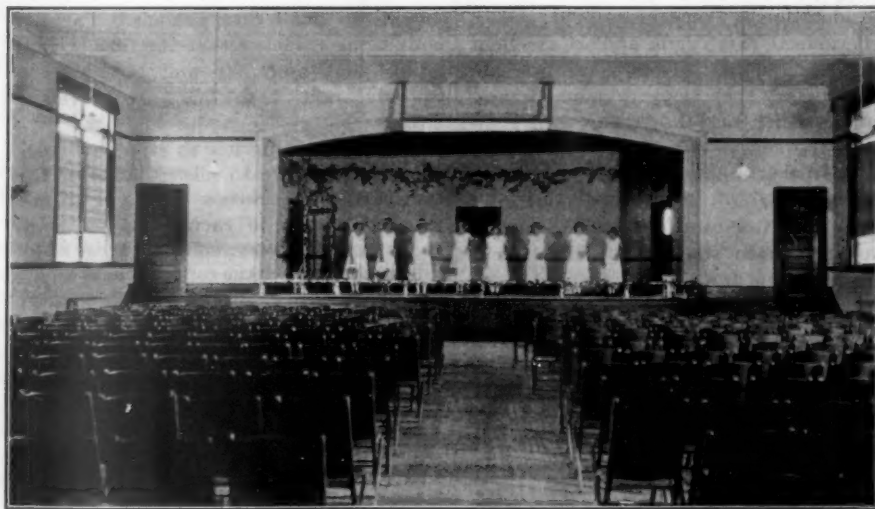
The membership of community organizations is not now confined within the borders of the small school district, and the one-teacher schoolhouse is no longer the social center of the neighborhood.

Many factors have contributed to the passing of the little red schoolhouse as a literary, social, and religious center. The

neighborhood. The one-teacher school will never again, to such an extent, be that center because of modern inventions. From data received by the Bureau of Education it appears that the rural school that is becoming the center of community interest is the consolidated school.

Parent-teacher associations and other community meetings are held in the fine auditoriums of the consolidated school buildings which are found in Montgomery County, Ala.

The Hand Consolidated School, in Connecticut, which is located in a village, reports that the school is the permanent meeting place for the American Legion post, that through the activities of the public health nurse it is a community



Auditorium in a consolidated school in Montgomery County, Ala. A center for community activities

telephone, the rural mail delivery, the automobile, and radio have widened the neighborhood circle far beyond the confines of the local school district. The growth of towns and the ease with which farmers can reach them have drawn heavily upon the social resources of the small rural communities. It is so easy, because of the automobile, to go to town on Saturday night, do the family trading and visit a "movie" besides. The opportunity to exchange gossip with the neighbors is also a great incentive for the Saturday night visit. This idea was well expressed by one countrywoman, who said, "I didn't have much to come to town for, but I wanted to see the folks."

The schoolhouse should still be the center for the community activities of the

health center for adults and children of preschool age, that a lyceum course and a community field day are held there.

The Hudson Consolidated School, at Hudson, Iowa, lists the following community activities that are carried on at the school: Club meetings, a farmers' short course, motion-picture programs, picnics, Christmas programs, community volley ball, and a lecture course.

Lakeview Consolidated School, an open-country consolidated school in Michigan, names a community club, parent-teacher association, dramatic club, boys' and girls' clubs, Boy Scouts, Girl Reserves, a glee club, athletic association, and gymnasium club as neighborhood activities associated with the school.

Professional Supervision—A Right of Teachers, Pupils, and Patrons

Every teacher who enters a school building to take up teaching as a vocation has a right to expect the kind of help which will develop her into a strong and capable teacher and keep alive within her a desire for professional growth.

Every pupil who enters a school building to secure an education has a right to expect that his teacher may turn to some one with wider experience and broader outlook for sympathy, guidance, and encouragement in adapting the course of study, selecting reference books and classroom materials, and for help in acquainting herself with new ideas and methods.

Every community which desires a progressive school program, characterized by effective and economical teaching, with better results in less time, should be willing to provide professional supervision, thus making such a program possible.

Proper supervision is something more than the occasional brief visits paid by most superintendents. Although many superintendents are qualified to supervise and are interested in supervision, they rarely have time for it. It is generally true that "administration crowds out supervision when they compete for the time and attention of one who has both responsibilities." Every school system needs not only professional administration but also professional supervision. The latter is indispensable.—Annie Reynolds.

How Public High Schools Have Grown

The growth of the public high school has been phenomenal. In 1900 only .68 per cent of the total population were enrolled in the public high schools of the country, but in 1922, 22 years later, 2.63 per cent were enrolled. In 1900 only 3.3 per cent of the total number of children enrolled in the elementary and high school grades were in high school; in 1922, 12.3 per cent of the total were enrolled in the public high schools.

Of the pupils enrolled in secondary schools, both public and private, the per cent enrolled in public high schools increased from 82.4 per cent in 1900 to 92.7 per cent in 1922. The relative change is not due to a decrease in the enrollment in the private high schools but to the phenomenal growth of the public high schools. In 1900 the enrollment in public high schools was 519,251 and in private high schools 110,797. In 1922 the enrollment in public high schools was 2,873,009 and in private high schools 225,873.—W. S. Deffenbaugh.

• SCHOOL LIFE •

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OCTOBER, 1924

Another Period of Educational Stimulation in Prospect

A GAIN the time approaches for the observance of American Education Week, the time of renewing the faith of the people of the land in that institution which is most distinctly American and most productive of good to the country—the common school.

Americans have a peculiar affection for the public school system. It was not ordained by higher authority, and allotted part by part to the several classes of "subjects" like the schools of many of the European states. It is their own, open equally to all, established in accord with their wish by their legislative representatives, and maintained under superintendents and teachers who delight in their cooperation.

Mere complacent satisfaction is not enough. That is too apt to subside into indifference. It does not respond readily enough to the unusual demands for funds and for those other forms of support that are inevitably necessary from time to time to maintain the highest efficiency. Keen enthusiasm, not smug complacency, is the thing. And it must be always ready to respond when the need arises.

There is but one way to keep up that enthusiasm, and that is by frequent agitation. The parent-teacher associations are the best means yet devised for reaching actual school patrons. Their value is incalculable so far as they go, but their influence does not ordinarily extend far beyond the parents of the pupils of the public schools. That is their allotted task.

More than this is necessary. The satisfaction which comes from the broader outlook that education gives should be impressed without ceasing, and not only the young but the mature of all ages should be stimulated to seek greater mental development.

With many persons the financial aspect of education must be emphasized. Taxpayers should be frequently reminded that wide-spread education increases the number of those who bear the burdens and

consequently reduces the amounts which each individual must pay. Business men should not be permitted to become so absorbed in their desire for immediate gain as to forget that popular education is the best possible stimulus to business. Professional men should be equally interested.

Persons of education and culture as compared with the untutored buy more and better goods; they travel more; they have more to contribute to religious and philanthropic undertakings; they demand for themselves and their families more frequent attention from dentists and physicians, and they are better able to pay the bills; their enterprises require more of legal advice. Popular education, in short, means a higher degree of civilization and greater prosperity for all classes of people.

Money spent for the education of one's own children means much. Money spent for the education of the children of others is an investment which produces dividends equally as large, even though they may come indirectly. All these facts are self-evident upon consideration. It is the duty of every person concerned in education, public and private, to stimulate that consideration by every means in his power.

Periodical campaigns are an excellent aid in such efforts. Local campaigns are fruitful, but they depend upon circumstances which may not recur with sufficient frequency. National campaigns under the stimulus of official sanction and with the aid of patriotic, civic, and professional organizations have been conducted annually since 1920. The benefit that has come from them is beyond estimate, and every consideration demands that they be continued indefinitely.

Such a campaign is now in prospect. The President of the United States is expected to issue a strong proclamation and unquestionably governors and mayors throughout the country will follow his example and issue similar proclamations. Let none withhold his support in making the occasion a success without precedent.



Some Districts Still in the Tallow-Candle Era

NOW that the general economic welfare of the farmer is receiving unwonted consideration on the part of the people of the United States, including statesmen and others in high places, and the relation between increased intelligence and production on the part of the farm population is becoming better understood, it seems proper to consider the school systems in rural communities and the efficiency of educational opportunities they offer to farm children.

Forty-seven per cent of all children in school are enrolled in open-country and small village schools, yet facilities offered the 47 per cent are by no means up to the standard accepted and practiced by the other 53 per cent. School terms in rural districts are on the average two months shorter than those provided in cities. During their school years children are under the charge of underpaid teachers, less than 10 per cent of whom reach the standard set for city teachers, namely, graduation from a standard teacher-preparing institution. In personal qualities and fitness, as well as in academic and professional attainment, the standard for cities is above that in rural communities.

Rural school buildings are often insanitary, inadequate, and unfit for their purpose. Thousands of country children leave school when they reach the age of 14 or 15 with no education beyond that usually obtained in the fifth or sixth grade. They do not participate proportionately in the general benefits of secondary and higher institutions because of the inefficiency of the lower schools. State teacher-preparing institutions send a negligible percentage of their graduates into small rural schools. There is convincing evidence that the farmer generally pays more for and receives less in education than his urban fellow citizen.

Perhaps nothing has so stimulated our thinking in regard to this situation as the building up in recent years of a few efficient schools in each State for rural children in the open country or in small villages. They have offered convincing proof that rural children are not inevitably doomed to poor elementary schools and inadequate high-school facilities. This has not been accomplished by accident. In most cases improved conditions have come about through some kind of reorganization of the administrative system which makes possible the collection in groups of larger numbers of children and the centralization for taxation of enough territory to insure conditions and revenues necessary for efficient schools. Education, if worth while, costs money. It costs more and more money as higher ideals prevail and as the costs of all the necessities of living increase. The country as a whole has generously provided for the increasing needs. Farm people as well as the inhabitants of the cities have passed the stage coach, pony express, and tallow candle era in most things, but some rural districts are yet in that remote condition, and in them the little red schoolhouse is still considered sufficient to provide an education fitting for life needs.

Now that we are awakening to the importance of the economic and social

status of our farm population, it seems a good time to remember that there can be no permanent solution of the problems presented unless the plan includes ample consideration of the educational facilities offered to farm children. We need the courage to face conditions squarely where they are unsatisfactory and the intelligence to apply the remedies which time and progressive communities have demonstrated to be effective. More money is needed in most States but equitable distribution and intelligent expenditure of revenue from old and new sources are of at least equal moment.



The Teacher Shortage is Still With Us

NO LESS than at any time in the past the need exists for teachers well grounded in subject matter and technique of instruction; for teachers inspired through an understanding of the child's nature to help him more fully to reveal himself.

The layman is beginning to understand that teaching is a profession as truly as law, medicine, or the ministry. Like these, it is founded upon a body of ethical and scientific principles which, with their applications, should be understood by its practitioners.

The number of trained teachers does not meet the demand. Three-fourths of all America's public-school teachers are not sufficiently trained; that is, they have completed less than two years of training beyond high-school graduation. The majority of the untrained teachers are in rural schools. More than 11,000,000 rural and village pupils are instructed by such teachers. More than 3,000,000 rural boys and girls in one-teacher schools are under teachers who have never completed their high-school education. Thousands of them have only an elementary school education.

The seriousness of the situation is intensified by the inexperience and immaturity of the teachers in the 175,000 one-teacher rural schools. Furthermore, the tenure of these rural teachers is short. About 50,000 more trained teachers are required. This estimate makes liberal allowance for beginning teachers entering the field from high school and normal training courses.

The need for trained teachers in rural schools has challenged the attention of State authorities. More than half a dozen States have adopted scholarship or bonus awards of considerable size to attract promising young people into teacher training institutions to prepare for rural teaching. Most of the States

give some assistance, such as free tuition, to prospective teachers.

Normal training courses are maintained in the high schools of some of the States. This, however, does not seem fully to meet the need. Three of the twenty-six States that have tried the plan have discontinued it. In another State it will be discontinued after this year. In still another State such secondary courses are not receiving any encouragement, for the State normal schools have attempted to take over the task of supplying the demand for fully trained teachers.

Even though all of the State normal schools and teachers' colleges plan to supply the demand for well-prepared rural teachers, many problems arise in their organization for the work. Assuming the end of rural and of city education to be the same, should the curriculum of both groups be identical? Many institutions make little or no difference between them.

Should all the observation and practice-teaching of the prospective rural-school teacher be done in the local training school, which usually approximates city-school conditions? Most normal schools offer only this; some offer little or no

practice. The cost of transportation and the task of administering rural observation and practice schools complicates the problem.

Are one-teacher rural schools disappearing so rapidly that normal schools may disregard this field and concentrate their efforts on preparing teachers for graded schools? Is the teacher of the sons and daughters of the farmer, who is taxed to support the State normal schools, receiving as much attention and as adequate training for the job as the city teacher?

With these and similar questions in mind, the Rural Division of the Bureau of Education has recently added a member to its staff to compile data and disseminate information on courses of study, observation, and practice teaching, and related subjects to those engaged in rural teacher preparation.

During the past 15 years the bureau has made many studies in the general field of teacher training. More than 40 bulletins, circulars, and leaflets have been published dealing with the problem. About one-third of these bulletins deal specifically with rural teacher training problems, and many of the others contain information applicable to that field.

The subject matter of the bulletins covers a wide range. A number of them deal with the training of teachers in special subjects, such as agriculture, mathematics, and nature study. Some discuss the need for training and the plan of observation and practice teaching followed in some of the teacher training institutions. Others discuss training of teachers in service. Studies of the training, experience, and salaries of teachers and of the State laws and regulations governing the issuance of certificates are reported. Some of the bulletins consider the various types of teacher training institutions, such as high school, county, and normal schools, as well as the problems of their standardization. Others consider teacher training in foreign countries. The surveys by the Bureau of Education of institutions of higher learning often deal with teacher training problems.

As the field of teacher training develops, the emphasis is shifted from one phase to another. New obstacles constantly arise. The problems of and the need for teacher training, however, remain as impelling and imperative as at any time in the past.



Malnutrition cases in the elementary schools of Bridgeport, Conn., show a decrease of almost 33 per cent between the years 1921-22 and 1923-24. This progress is attributed to health education training and instruction for malnourished children.

IT IS A MISTAKE to say that we have much ignorance in this country. There is little of what is generally called ignorance in the United States. In the Old World, under the despotism of Europe, the masses of ignorant men, mere inert masses, are moved upon and controlled by the intelligent and cultivated aristocracy. But in this Republic, where the Government rests upon the will of the people, every man has an active power for good or evil, and the great question is, will he think rightly or wrongly; shall the power in him be educated and directed aright toward industry, liberty, and patriotism, or, under the baneful influence of false theories and evil influences, shall it lead him continually downward and work out anarchy and ruin both to him and the Government?

The question is not whether our people shall be educated or not. If they are not educated in the school of virtue and integrity they will be educated in the school of vice and iniquity. We are, therefore, afloat on the sweeping current; if we make no effort we go down with it to the saddest of destinies. It is only by perpetual and persistent effort that we make headway and advancement in civilization.—James A. Garfield, June 8, 1866.

Austrians Are Testing New School Types

Trial Will Continue Until 1931 and Results Will Determine Whether New Types or Old Will Survive. Einheitsschule Postpones Decision of Child's Educational Future Until Reasonable Maturity is Reached

By ROBERT W. HEINGARTNER

American Consul at Vienna

SOON after the collapse of the Austrian Empire the Social Democratic Party took up the question of school reform in Austria and made this issue one of the most important planks in their platform. It is claimed by other parties that the Social Democrats made such a prominent feature of school reform in order to undermine the influence of the Catholic Church in educational matters and to win partisans among the teachers, who were promised freedom of opinion and the possibility of individual development under a Social Democratic administration. It is claimed that many of the reforms in teaching propagated by the Social Democratic State Secretary Gloeckel were employed previously by first-rate teachers of the old system, and that reform would have come gradually as conditions become more consolidated in the country.

Normal Children Complete Eight Classes

In Austria every child is obliged to attend the schools from his sixth to his fourteenth year. Up to now the public schools consist of the elementary school (comprising five classes) and of the grammar school (Buerger-schule) comprising three classes. In some of the Viennese grammar schools there is a fourth class which can be attended by pupils preparing themselves for admission to teacher seminaries or other training schools. Thus a normally developed child can complete five classes of the elementary school, and either three or four classes of the grammar school, during the time fixed by law for the child's education.

Public schools have always been free of cost for tuition, but educational requisites, namely, books, copy books, rulers, pens and pencils, colors, thread and needles, etc., had to be furnished by the parents of the children except in needy cases. At present the Social Democratic Vienna municipality supplies all children without distinction with the necessary educational requisites. The yearly cost of these supplies is 4,500 million crowns, and it is considered superfluous by many people that the Vienna municipality, which is always in financial difficulties, should make this expenditure for children of well-to-do persons.

School Tours Require Heavy Expense

Another expenditure of 1,200 million crowns is made for the use of the tramways four times a year free of cost when making

Official report to the Department of State.

school class excursions, which take place as provided for by law.

Heretofore the parents had to decide after completion of the fourth or fifth class of the elementary school—that is, at the age of 10 or 11—whether or not the child should be prepared for a university education. In case a university education was contemplated the child was placed in one of the three institutions preparing for the university (duration seven to eight years), viz, Gymnasium (with Latin and Greek), Realgymnasium (with Latin and one modern language) or Realschule (with two modern languages and detailed instruction in mathematics). If university studies were not contemplated education was continued in a grammar school.

Purposes of "Einheitsschule" or Middle School

Soon after the collapse of the monarchy a new type of schools, the so-called "Einheitsschule" or middle school (duration four years), was created in the six federal educational institutions. The idea of this "Einheitsschule," which is in a way a fusion of the plan of instruction employed in the grammar school and the lower classes of the different types of the Gymnasium, is to enable parents to decide as to their children's future education when children are in a more developed age—after the completion of the "Einheitsschule," and not after the five years elementary school.

As the studies in the six federal "Einheitsschulen" created in 1918 were completed in June by the first pupils who followed these courses, classes of a new type of schools, the so-called "General Educational Upper Schools" (allgemein bildende Oberschulen, duration four years) was opened for them in the autumn of 1923. This new type of school, which is as follows, will be tried in four variations, according to the special aptitude and talents of the pupils:

Four Variations of New Type of Schools

1. The ancient-language upper school, which will deal principally with the study of the ancient languages and civilization as compared with the present civilization.
2. The modern-language upper school which will deal with the works of the western nations (French and English) and will, by the study of the characteristics of those nations, lead to a thorough understanding of Austrian nationality and culture.
3. The upper school for mathematics and natural science, which will serve to train

individual thought on the basis of mathematical studies and experimental natural science.

4. The German upper school, which will explain the culture of the Austrian nation in its principal ramifications—in language, science and arts, religion and philosophy, state, society, and political economy, as well as in the natural and historical conditions which were decisive for its development. It is believed that by drawing from these sources of German culture the way will be prepared for a universal comprehension of the culture of the present age.

This fourth type is meant to replace the teacher seminaries, which last four years as a continuation of the grammar school. As the present education of teachers is considered inadequate, the four-year "Deutsche Oberschule" with one or two years university will probably be the future education of teachers.

Pupils who have completed the course in this "General Educational Upper School" will be entitled to admission to the universities.

In case the results of the "Einheitsschule" (middle school) and the different types of the "General Educational Upper School," which follow, should prove to be satisfactory, it is planned to eliminate the grammar school (Buergerschule) entirely, and to modernize the Gymnasium, Realgymnasium, and Realschule on the lines of the "General Educational Upper School."

All these school-reform experiments will be tried out up to the year 1930-31, and it will then be decided whether the new schools shall be generally established throughout the country or gradually withdrawn.



State Legislatures Meet at Varying Intervals

Six State legislatures meet annually.—

All of these States are on the Atlantic seaboard and all were of the original thirteen colonies: In New England, Massachusetts and Rhode Island. On the North Atlantic, two at the mouth of the Hudson, New York and New Jersey. On the South Atlantic, two at the mouth of the Savannah, South Carolina and Georgia.

*Five State legislatures meet biennially and in even years.—*All of these are southern States: Two at the mouth of the Potomac, Maryland and Virginia. One at the mouth of the Ohio, Kentucky. Two at the mouth of the Mississippi, Mississippi and Louisiana.

All other State legislatures meet in odd years, but regular sessions in Alabama are quadrennial in the year before leap year. Forty-two legislatures will be in regular session in 1925.—William R. Hood.

The Place of the Museum in University Instruction

Without Aid of Museum Specimens Many Courses Can Not be Given Successfully. Natural Methods of Exhibition Coincident with Revival of Use of Concrete Objects. University Museums Differ Essentially From General Museums in Being Distinctly Technical. Characteristic Methods of University of Illinois

By FRANK COLLINS BAKER, Curator of Natural History, University of Illinois

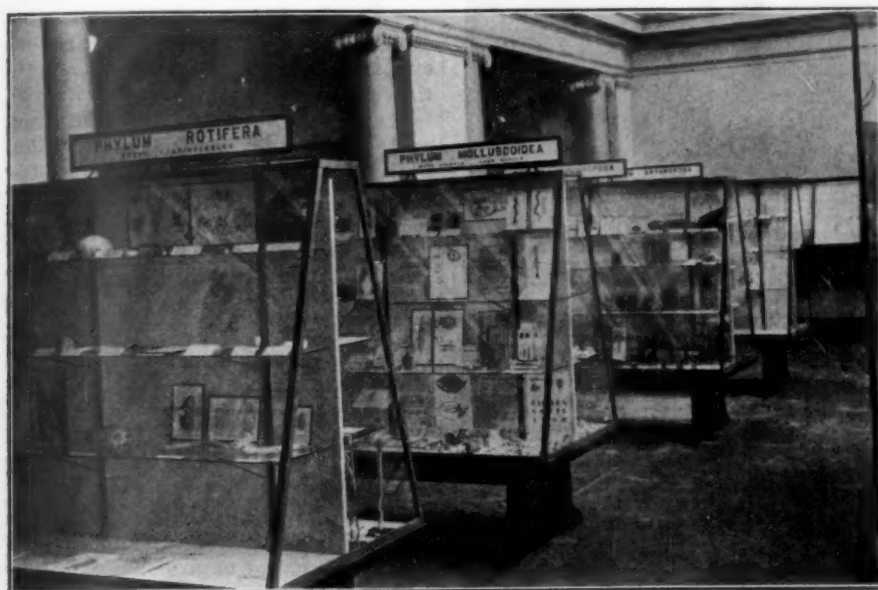
NOT MORE than a dozen of the 200 university and college museums in the United States are functioning in a satisfactory manner; the great majority are of little or no value as an aid to actual instruction. The

As life in general is a cycle, so is teaching, and there are abundant evidences that the use of museum material is again to function, and in a much larger measure than before. This revival appears to be coincident with the more modern and

course much more intelligible. Fragmentary periods in classroom and laboratory may be cemented into a rational whole by a review of a good exhibit. Such subjects as variation, evolution of types, metamorphosis of growth, and others can be taught successfully only by the aid of museum exhibits, either in laboratory or museums. Museum specimens are absolutely essential for the proper teaching of many subjects and these specimens should be rationally arranged to bring out some principle.

A university museum, however, appeals to a class different from the general city museum. Here all are trained to think and observe, and both the exhibits and the descriptive labels in large part must be of a more technical character. This does not mean, however, that less technical exhibits may not occasionally be used, solely for the purpose of educational enjoyment. The exhibits must, for the most part, fit into some course of study. This statement relates particularly to the exhibit halls. There is another side of university museum activity—that of research and the storage of material illustrating the natural resources of a state or region which is even more important than exhibition. But this is another story.

I wish to point out concretely some of the methods that are employed in the



Synoptic exhibit of invertebrate

students of science and art are, therefore, deprived in great measure of a very valuable and potent aid in more clearly understanding those subjects, besides missing the pleasure and satisfaction derived from visits to the museum halls, which all students enjoy. Without the aid of museum specimens, some courses can not be given with any degree of profit.

Years ago, the museum was considered a valuable aid in most colleges and universities, and the late Prof. Henry A. Ward, for some years connected with the University of Rochester, N. Y., supplied a large number of these institutions with reproductions of famous fossils and other natural history material. These college collections may be found in many institutions to-day, dusty and neglected, mute witnesses of a great and vanished past. The startling results of studies in evolution, heredity, and animal experimentation placed these tangible teaching equipments in obscurity, where they have remained for more than a score of years.

natural methods of exhibition adopted by the progressive museums of America.

There can be no question that a well-arranged museum can make a science



A section of the museum of the University of Illinois

Delivered before the American Association of Museums, Washington, 1924.

museum of the University of Illinois to make the exhibits of value and to help in actual instruction.

We have a course called zoology I, a beginning course in animal classification and generalizations in zoological theory.

methods of growth, reproduction, metamorphosis, etc. A more advanced course in taxonomic and distributional problems also includes reference to this exhibit. An exhibit of the pearl-button industry supplements this case.



How butterflies pass the winter

To supplement this course there is a synoptic exhibit filling 7 cases for the invertebrates. This includes both recent and extinct forms, is illustrated by more than 300 diagrams—many of them by that veteran teacher, Dr. J. S. Kingsley—200 models and restorations of extinct forms, and scores of descriptive labels. This exhibit is also used in an advanced course in invertebrate morphology. The cases are of a new type, giving the maximum of exhibition space within a reasonable range of vision. Every specimen may be clearly seen and every label distinctly read. Each case carries a caption label in 2-inch letters indicating the phylum represented, so that no student may have the least difficulty in finding the particular exhibit assigned for study.

A synoptic exhibit of vertebrates is also available, which now fills 9 cases, but will soon be rearranged along modern lines to fill 12 cases. This is used primarily in connection with our course in vertebrate zoology.

A course in field zoology includes the collection, preservation, and identification of common representatives of the local fauna. Chief among these are the river mussels, and to supplement this course there is a case of the river mussels of Illinois, showing their range in variation, both of age and sex. Labels and illustrations indicate the economic value,

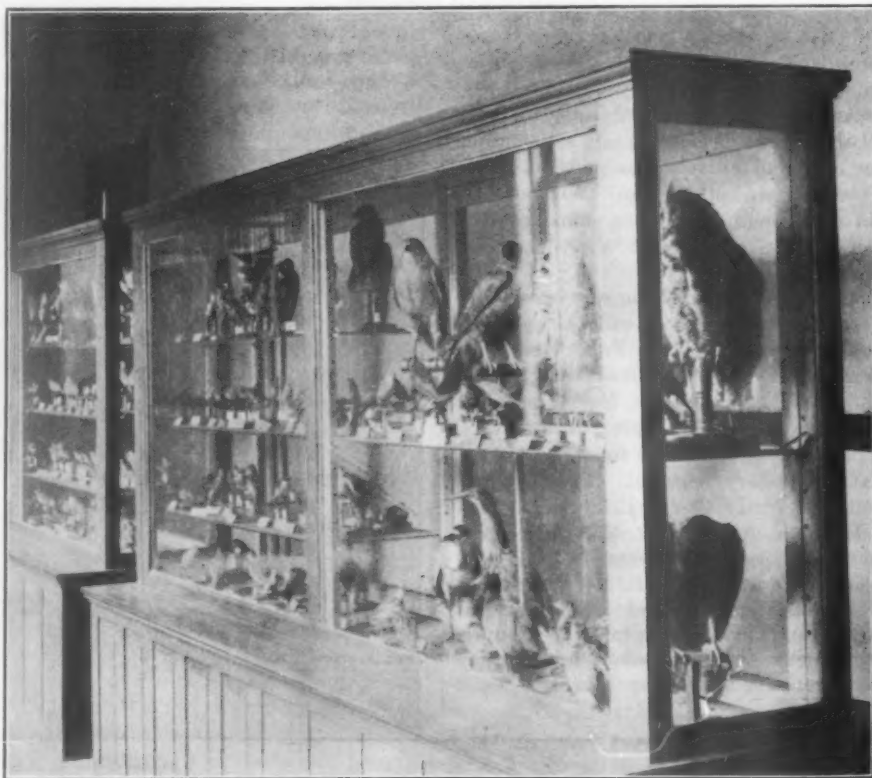
A course in animal ecology, the relations of animals to their natural environments, makes use of a case of transparencies made from the most perfectly constructed

animal groups in American museums. These are so beautifully executed that many students have asked the question, "How did they get the animals to stand still for this photograph?"

Evolution and heredity are subjects taught at Illinois, and a case has been prepared to illustrate the evolution of the horse, the most classic as well as the most complete example of the theory of evolution. This is arranged to show the stratigraphic sequence geologically, the evolution in time, as well as the principal stress in the course of evolution—the loss of toes, the increase of size, and the change in tooth structure. At the end of every semester, just before examinations, the curator gives a demonstration in evolution for the benefit of students in some of the courses outlined. This includes evolution, variation, migration, metamorphosis, geographic distribution, and human evolution. The demonstration includes material in 23 different cases on two floors of the building.

A course in ornithology makes exclusive use of an exhibit of local birds. This is one of the most thoroughly used exhibits in the museum, and in the spring particularly, when bird identification is active, there are usually from one to a dozen students doing assigned work several hours in the day.

Geology by its very nature must make use of specimens, and a museum is especially adapted to give substantial aid in courses in this subject. At Illinois two



Birds of Urbana and the vicinity

courses at present make some use of the synoptic exhibits in invertebrate zoology, the more recent forms being compared with the extinct forms also exhibited. A course in invertebrate paleontology and in stratigraphy are so used. The synoptic collection is an example of the fact that a well-arranged exhibit may serve several purposes. This collection is used by the zoologist to show the correlation between extinct and living forms. The exhibits of commercial geography, including products from corn, cotton, rubber, the button industry, beverages, and others, are used to some extent. Six new cases are in preparation to contain

structured, known under the following captions: Insect pests of the corn plant; Enemies and friends of the apple tree; How butterflies pass the winter; The old log habitat. These, of course, are of especial benefit to economic entomology and are particularly useful in the course introduction of economic entomology.

A synoptic exhibit of insects is used by classes in systematic entomology. These exhibits are also of special interest to the men taking the short course in agriculture of two weeks.

The method of exhibition, labeling, and use of these cases is believed to be unique. Each case is 3 feet square, the exhibit is

the students being required to find all stages represented. Several days after this study a quiz is given, all labels being removed and the student required to describe the different stages and their significance. Several days before this quiz is given students are noticed about this case in unusual numbers, and they have even gone into the museum hall in the evening to prepare for this examination. Many exhibits of this type will probably be added to those in the museum.

Exhibits in a university museum need not be confined to those of the natural sciences. History, both modern and ancient, American and exotic, may be greatly aided by museum exhibits. Some of these are to be found in the other museums on the campus of the University of Illinois—European culture, with Prof. Neil C. Brooks as curator, Classical art and archaeology, with Prof. Albert T. Olmstead as curator—all are used more or less as aids to instruction. Museums of art would no doubt be useful, but seem to be few in number in universities.

American history teaching might be greatly stimulated and aided by the establishment of museums of history, and if the great events of our country's short life could be portrayed in miniature, as is being done on a large scale in the Milwaukee museum, the effect on the undergraduate would be surprising. Every university should acquire material illustrating the culture of the States and colonies during the earlier years of the country's existence, so that the student may visualize times and conditions, which he can not do simply from reading textbooks. There is a wide field in this direction for a curator who has training in museum technic and a thorough knowledge of American history.

I have endeavored to indicate the place that the museum of the University of Illinois holds in the curriculum. Many of the museum exhibits are intimately associated with definite courses. It is proposed to expand and augment this policy until every phase of museum activity that can be made to aid the regular courses of instruction has been put in operation.

We are particularly fortunate at Illinois in having a staff of instruction that has seen the possibilities of the museum in strengthening the regular courses. Without this willingness to use the exhibits and the friendly cooperation in their preparation, the museum would be of little value. I suspect that in some universities and colleges the faculty will themselves have to be educated to realize the value of museum exhibits. With this end in view I submit this short account of the museum relationship at Illinois, hoping that the unusual success which has attended our efforts may stimulate those interested in similar work in other higher institutions.



Insect enemies of the corn plant

exhibits of historical geology or stratigraphy.

The department of sociology has made use of the exhibits in ethnology (social evolution), using as illustrative material the exhibits of American Indians and especially the restorations of primitive man made by Doctor McGregor. Recent additions have made this department of the museum of great benefit in this direction.

Entomology especially lends itself to museum technic and the preparation of useful exhibits in aid of teaching. For this purpose four groups have been con-

3 feet above the floor, and the case is but 5½ feet high. It is observed from four sides, three species of injurious or beneficial insects being shown, in their life history, on each side. Each species is described by a label printed in 12-point type, indicating the damage done, the life history of the insect, its natural enemies, and the control advocated by the best authorities. A description of the exhibit and references to literature completes the label. The exhibit of corn insects is probably one of the best-used cases in any university museum. It is first studied rather closely by the class,

New State Program in Physical Education for Missouri

Games the Best Foundation for Physical Training. Frequent Recesses are Beneficial. Five Acres Should be the Minimum for a City School Site. Proper Selection of Games

By HENRY S. CURTIS

Director of Hygiene and Physical Education for Missouri

TO PROVIDE for all children training of the highest physical value and of social and moral value as well, the Missouri State Department of Education is promoting a program in physical education built chiefly on athletics and games.

Play is the method which nature herself has devised for the initiation of the young and the activities of the old. The fundamental training which the girl gets for her life as housewife and mother is the training that she gets from playing with her doll. The play of the boy is one project after another; he builds a playhouse in the yard; he puts a water wheel in the brook. Our project method in education is but a meager attempt to do the same thing in the schoolroom. The initiation of the child into society comes almost altogether through his play. In play he learns to get on with other children; to make friends, and be a good comrade. He gets his ideas of honesty or dishonesty mostly from the games he plays. A dishonest coach can do more to make a whole student body go wrong than all the Sunday schools can do to make them go straight. The team game is the great school of loyalty. Loyalty to the team is essentially the same as good citizenship applied to the city, or patriotism applied to the country.

Games Cultivate Quick Mental Action

There are many people who should not drive an automobile—their reaction time is too slow. If a child runs in front of them, they run over him. But they never played football. If, instead of shivering on the sidelines they had gone into the game and got some training in quick thinking, they might now be able to step on the brakes at the right moment. In football or baseball all the decisions are made in small fractions of a second, and countless emergencies arise in every game. The energy of the motor areas is the energy which runs the brain in all of its activities.

The big end of physical training is in the first grade. The little child is motor minded. Nearly all of his interests are in motor activity, while many of the intellectual interests are not yet developed.

Yet the school is suppressing rather than promoting the activity of children.

As a result of a long series of experiments carried on in Europe 30 years ago, a law was passed in Germany providing for a 15-minute recess in every hour. The State Department of Education of Missouri is asking for two 20-minute recesses in the morning, and two 20-minute recesses in the afternoon for the first three grades. In California the law forbids a school day longer than four hours in the first four grades. Out of these 4 hours one half-hour recess and two 15-minute recesses are taken, leaving 3 hours of school. Yet California stands near the top of every educational list. With a six-hour school day in Missouri, we can easily take two hours for physical training in the first three or four grades and still have as much work done as we are now doing. Small children have very limited powers of application and do not profit by long periods. Applying the standard arithmetic test to the fifth grade of 40 cities, it was found that exactly the same progress was made by those using the 15-minute period as by those using the 45 minute period.

Grounds a Part of School Equipment

The city elementary school should have a minimum of 5 acres of ground; the junior high school should have 8, and the senior high school 12 acres. This ground must be made level and a part of it should be surfaced. There should be trees around the edge, but no trees in play spaces. Under the Missouri physical education law the school ground becomes as much a part of the school equipment as the schoolroom. It must be in condition to use.

There should be a running track, a jumping pit, and three or four horizontal bars along the side of every school ground. This permits the standard athletic test to be given—that a boy shall run 60 yards in 9 seconds, jump 5 feet and 9 inches standing, chin a bar 4 times, and throw a baseball 130 feet, or pitch 3 strikes out of 6 deliveries. This test is uniform throughout the United States, and a standard medal is given for it.

The race has an interest in the health and physical development of girls that it

does not have in the boys. Girls should avoid strains and bruises, but such exercises as walking and swimming, tennis, and volley ball are much more significant for them than for boys.

Beginning with the fourth grade, two indoor baseballs and four bats, two volley balls, and, where feasible, a soccer football should be furnished to each grade. Then when a class has a physical training period they can take their own equipment and go into the yard to play without loss of time.

In the elementary schools it is expected that physical training shall be conducted by the regular teachers under the supervision of a physical director. In the junior high schools and high schools physical training should be under regular physical directors. At all of the large schools there should be someone in charge after school until supper time. In congested sections the school grounds should be lighted for use at night.

Five Principles in Selecting Activities

In selecting activities for a program, the Missouri State department has been governed by five general principles:

1. It seeks to train the type of muscle and social development that life needs. On the physical side, walking is the primary form, and with most of us it is the only physical activity that we keep up after we get through school. It represents at least 90 per cent of all of the physical energy we develop. On the social side, the development of friendships and good comradeship comes almost altogether through play in childhood.

2. In selecting games, baseball and football must be rejected from the program of the elementary school, because there is not enough room and because girls do not play.

3. The activities put into the program must be such that all children in a class can take part. On this basis, basket ball must be rejected. Because of the violent strain on the heart, basket ball should not be played without a careful physical examination.

4. At least two hours of physical exercise each day is necessary for a vigorous boy or girl. If we can not put more than one-half hour into the program, we must give school activities that children will carry on after school, on Saturdays, and during the summer time. The only ones that meet these conditions are athletics and games.

5. The activities selected should be of a type that carry over into life, as tennis, cricket, and hockey do in England, where they are often played until men are 60 or 70 years of age.

The Missouri Department of Education is encouraging much more walking

than we have had. It hopes to be able to make a definite requirement. Every boy and girl should learn to swim before graduation from high school. In every possible way will the department encourage every boy and girl to play tennis. A vigorous type of folk dance has a specific place and should be encouraged.

Volley ball, playground baseball, and circle dodge ball will be on the program for every school. Volley ball is a game which we begin to play at 8 and continue to play until we are 80. It can be practiced in the backyard of nearly every house. It has great corrective value, as it tends to put the head back and deepen the upper chest.

Soccer ball is undoubtedly the most popular game in the world. It is played all over South America, Europe, Australia, New Zealand, India, South Africa, Japan, Canada, and the Philippines. It is compulsory in English preparatory schools from the time the boys are 8 years of age. It is required also in about half of the English high schools for girls. At the meeting of the State directors of physical education in New York in January it was voted unanimously that soccer is a much better game for the junior high school than the American game of football. The belief was also expressed that men would be better players in the American game in college if they had played soccer throughout the high-school period. The Missouri State department will encourage soccer both for girls and boys wherever possible. This is entirely in line with what has taken place all over the world since the war.

Higher Salaries Naturally Follow Better Preparation

Differences in salaries reported by one normal school last year show that its two-year graduates received from 30 to 40 per cent larger salaries than did those students who went out as undergraduates to teach.

In a recent unpublished study by the Bureau of Education a comparison is made of the preparation and salaries of nearly 2,000 teachers distributed among the States in over 300 villages of less than 500 population. The average monthly salaries of teachers with elementary-school training only is \$83; with some high-school training, \$94; with four years of high-school training, \$95; with one year of normal school, \$104; with two or more years of normal school, \$113; college graduates, \$156.—*W. M. Robinson.*

The Thirteenth Annual Safety Congress of the National Safety Council was held at Louisville, Ky., September 29 to October 3.

What to Observe When Visiting Schools

When you visit your schools American Education Week what are you going to observe and what information are you going to seek from the principal and teachers? According to school superintendents who have written to the United States Bureau of Education on these points, parents should observe: The general attitude of the children toward the school; the general physical condition and sanitation of the school buildings; the amount and use of play space; the size of classes; equipment of the schools, as library, gymnasium, shops, maps, etc.; and the exhibit of the children's work.

Parents should seek information on the standing of their own children in their school work; whether their children are working up to their full capacity; what the parent can do to help his children do better work; what bad school habits have been noted; what are the qualifications demanded of the teaching force; what salaries are paid to teachers; how school costs compare with costs in like communities; what proportion of the pupils of high-school age are in high school; what provision is made for children of kindergarten age; why pupils leave school; and what the parents may do to help the schools.—*W. S. Deffenbaugh.*

Instruction in Biology in Oregon Grade Schools

Sponsoring the teaching of biology, or the science of life, in the grades is regarded by the Oregon Social Hygiene Society as the most constructive and outstanding piece of work in connection with the schools. Not only has this science given the children a natural and wholesome attitude toward bodily functions but it has also taught them to observe accurately, to experiment carefully, and to draw sound conclusions from their own observations and experiments.

MY FLAG, born in the days of the Revolution, baptized in the days of civil strife, rededicated to the cause of human freedom in the great world conflict; in peace and war it has ever floated as the symbol of liberty and justice. May its stars never grow dim and its stripes never fade. And may the children in the schools over which it shall float be so taught to love justice, to hate evil, to do good, that they may forever protect the flag and the ideals for which it stands.—*Randall J. Condon.*

Get More Pupils into the Games

Physical Directors Favor Further Efforts Toward General Participation in High-School Athletics

OPPPOSITION to Rugby football for elementary or junior high-school boys and approval of soccer-football as a better game for all high-school pupils are expressed in a resolution adopted at the second conference of State directors of physical education called by the United States Bureau of Education.

Discussion centered around management of athletics for boys and girls, especially in interschool competition, and the following resolutions were passed:

(a) We approve the participation in athletics by the majority of pupils.

(b) We would limit the length of the high-school interscholastic season in football or basket ball.

(c) We would eliminate interstate or intersectional games involving long trips.

(d) We would eliminate post-season interstate and intersectional athletic contests.

Relative to competitive athletics for girls the directors expressed themselves as opposing State, interstate, or intersectional basket-ball tournaments and as favoring intraschool activities rather than interschool contests. They recommended extension, under the supervision of women teachers and directors, of nonpersonal-contact athletic sports of a type suited to girls' physiological and social needs. They recommended that, surrounded by proper physical and social safeguards, a majority of the students should participate in noncombative contests conducted for the benefit of the participants.

Finding time on the school program for matters pertaining to health, and adequate training of the regular teacher for such work were cited as difficult problems on which some progress has been made.

That States vary widely in the nature and enforcement of their physical education laws and in the duties assigned to directors of physical education in States where this office exists, was brought out during the conference. Thirty-two States now have physical education laws. Only 12 of these States have appointed State directors, but another State which has no specific legislation on the subject has a director who is an official of the educational system.

In some States the physical director has charge of only the exercise side of physical education; in other States he supervises also the health instruction of the classroom and may have charge of the medical inspection of pupils.



Group of children who participated in a "play festival" at Highland Park, Va.

Virginia Governor Urges Attention to Children's Health

Thought to the health and well-being of the children was recently enjoined upon the people of Virginia in a formal proclamation by Gov. E. Lee Trinkle. He advised that full support be given to public health officers and sanitary advisors in all matters of nutrition, housing, nursing, ventilation, recreation, and other elements that make for individual well-being.

Further, he recommended that celebrations with games, music, and athletic events be planned to focus the attention of each community upon its children and emphasize the value of play and recreation in promoting good health.

His suggestions were widely followed throughout the Commonwealth, and the citizens' associations and community centers were active in promoting the celebrations which the governor recommended. One of them is illustrated by the picture on this page, which represents a group of children who participated in the play festival at Highland Park. A thousand children took part, and 5,000 persons were present to witness the event. The festival was planned by the Highland Park Community Center, of which A. A. Guy is chairman.

In an effort to reduce to the minimum interruptions of school time, William McAndrew, superintendent of the public schools of Chicago, has caused the meetings of the high-school teachers' council to be discontinued.

Effect of Size of Classes Upon Efficiency

Relation of size of class to efficiency is the subject of a project under study by the Bureau of Educational Research of Ohio State University. Four Ohio cities—Cleveland, Cincinnati, Akron, and Toledo—are participating in the project as it relates to the elementary grades. Pupils are grouped for a semester in a large class, followed by a semester in a small class, taught in each case by the same teacher, while another teacher has a group of children in a small class during the first semester and in a large class the second semester. As determined by testing, the classes have the same average and variability of intelligence. This is but one of the projects of the elaborate program which the bureau has under way.



Seventy-seven traveling teachers are employed in Cuba to give instruction in 187 centers in sparsely populated districts. They instruct 3,639 children.

I CONSIDER knowledge to be the soul of a republic, and as the weak and the wicked are generally in alliance, as much care should be taken to diminish the number of the former as of the latter. Education is the way to do this, and nothing should be left undone to afford all ranks of the people the means of obtaining a proper degree of it at a cheap and easy rate.—*John Jay.*

Classical Education Best Basis for Industrial Work

Classical studies are advocated by Sir Arthur Duckham, a prominent English industrialist, as the foundation of all development in industrial work. Sir Arthur was one of the principal speakers before a recent conference of headmasters of British public schools (of the Rugby, Eton, Harrow, Winchester kind), and he asserted that industry badly needs men capable of taking the lead. Industrialists like himself are always searching for men to control works, control men, and carry on efficiently, he said, but it was with the greatest difficulty that they obtain this class of man. The openings in industry to-day are greater and the prizes higher than ever, but there is a lack of really fine, sound men as leaders.

Many branches of industry are suffering from inefficiency, he continued. Public-school training is ideal as a beginning for the men who were going to keep the country prosperous. Industry is really an interesting occupation; he would rather be in industry than in a bank or financial house, or other black-coated kind of work that public-school boys were rather inclined to enter.

The first thing needed in industry, he added, is a fellow who would do his job; he should also be able to express himself. To that end he believed in a classical education as the foundation of all development in industrial work.



The world has still to realize its debt to the common schools of America.—*H. G. Wells.*

New Books in Education

BY JOHN D. WOLCOTT
Librarian Bureau of Education

ALMACK, JOHN C. Education for citizenship. Boston, New York [etc.], Houghton Mifflin company [1924] xvii, 287 p. 12°. (Riverside textbooks in education, ed. by E. P. Cubberley.)

This work is written from a practical point of view, with the purpose of instructing teachers in the principles and methods of effective training for citizenship. After discussing the meaning and problem of civic education, the author shows how the school may be put on a civic basis, in a section which gives particular attention to civic values in the school organization, in school government, and in social institutions. Directions are next given for using civic materials and methods from various sources, such as the social sciences, the regular school subjects, and moral training. Other aspects treated are how to utilize special occasions for civic training, and civic training through school service, social methods, and personal guidance. The final section deals with the integration of the school and the community, showing how these may cooperate in raising the standard of citizenship. The particular functions of the teacher in relation to civic improvement are also brought out.

AVERILL, LAWRENCE AUGUSTUS. Elements of educational psychology. Boston, New York [etc.], Houghton Mifflin company [1924] xii, 425 p. tables, diagrs. 12°. (Riverside textbooks in education, ed. by E. P. Cubberley.)

This textbook applies the general principles of psychology as a science to the classroom problems of elementary school teachers. Such topics as easily lend themselves are subjected to experimentation in the course. In a brief final summary the author points out how largely, after all, education is a process of producing desirable changes in children, and shows how teaching is an art based on the results of scientific research. The chapters in this concluding section deal with the transference of training, and building a well-adjusted personality.

BAGLEY, WILLIAM C., and KEITH, JOHN A. H. An introduction to teaching. New York, The Macmillan company, 1924. x, 400 p. 12°. (American teachers college series, ed. by J. A. H. Keith and W. C. Bagley.)

As an introduction to a series of books on specific topics designed expressly for students of collegiate grade in professional schools for teachers, the present volume aims, through a brief but comprehensive survey of the field, to orient the prospective teacher with regard to the outstanding problems of education, to give him a balanced perspective on disputed issues, to develop in an initial way the meanings of the more important technical terms which his later studies will involve, and to facilitate on his part an intelligent choice of a particular field of service. It gives the basic facts regarding teaching as an occupation, explains the essential nature of teaching and learning, considers the materials of universal education, and outlines the psychology of the educational process. Public education as a vast social enterprise is concisely described, and the personal and specific qualifications requisite for teachers are discussed.

BURNHAM, WILLIAM H. The normal mind; an introduction to mental hy-

giene and the hygiene of school instruction. New York, D. Appleton and company [1924] xx, 702 p. 12°.

The mental health of normal children is dealt with especially in this book. It maintains the thesis that the essential characteristic of the normal mind is an integration of the personality that makes adjustment possible, and it discusses conditions and methods that tend to preserve and develop integration, as well as conditions and practices that tend to disintegration. Instead of attempting a systematic and complete treatment of the whole subject, the author has confined himself to illustration of significant aspects of mental hygiene and the hygiene of instruction in a few important parts of the field.

FOWLKES, JOHN GUY. School bonds. Milwaukee, Wis., The Bruce publishing company [1924] 177 p. tables, diagrs., facsim. 12°.

The guiding principles for issuing school bonds are presented by the author of this book, for the benefit of school officials and of students and teachers of educational administration.

Methods of financing school building programs are first discussed, and the nature of school bonds is defined. Other topics taken up are the trends in school bonded debt assumed annually and ways of justifying a school bond issue, also the marketing, retiring, and recording of school bonds. The final chapter gives some functions of State departments of education in issuing school bonds.

FREELAND, GEORGE E. The improvement of teaching. New York, The Macmillan company, 1924. xv, 290 p. front., plates, 12°. (Modern teachers series, ed. by W. C. Bagley.)

This volume comprises a collection of case-studies in the art of teaching, from observation of the procedure of successful teachers, with an interpretation of the principles involved, so that they may be applied in the improvement of teaching elsewhere. The material appeals first to students preparing for teaching, next to teachers in service, and lastly to the general public, parents, and school boards, so that those who support public education may be posted on the distinguishing marks of good teaching.

HAYNES, MERRITT WAY. Teaching shop work; a handbook for instructors in vocational schools and for students in trade-teacher training classes. Boston, New York [etc.], Ginn and company [1924] x, 238 p. illus., forms, diagrs. 12°.

Here are given the results of the author's experience while conducting evening classes for trade teachers under the auspices of the New Jersey State department of public instruction. The material is published for the benefit of all workers in the field of vocational education, and particularly for director of teacher-training classes. By a process of analysis the subject of trade-teaching is resolved into the following units: Principles of vocational education observation of teaching, trade analysis, principles of teaching, practice-teaching, shop organization and management, psychology applied to student analysis.

LINCOLN, EDWARD A. Beginnings in educational measurement. Philadelphia,

London, Chicago, J. B. Lippincott company [1924] 151 p. tables, diagrs. 12°. (Lippincott's educational guides, ed. by W. F. Russell.)

This elementary manual on tests and measurements has grown out of the needs of university extension classes for a concise textbook of this sort. After a general introduction, the author takes up the topics of subject-matter tests, the mathematics of measurement, the use and misuse of tests, and the measurement of intelligence and of character. Directions for the use of tests are given, and an appendix affords lesson plans and other suggestions.

MILLER, CLYDE R. and CHARLES, FRED. Publicity and the public school. Boston, New York [etc.], Houghton Mifflin company [1924] x, 179 p. 12°. (Riverside educational monographs, ed. by H. Suzzallo.)

Of the authors of this book, Mr. Miller is director of publications, Cleveland public schools, and Mr. Charles is a member of the editorial staff of the Cleveland Plain Dealer, who has had long experience in writing and editing educational news. The fact is emphasized that, in order to secure adequate support for public education, the people must be supplied with information regarding the public schools and their needs. This may best be accomplished through the newspaper, which is an important factor in popular education as well as the school. Effective school publicity is not a matter of occasional drives; it aims to promote complete all-year-round support and sympathy between the taxpayer and the school by the use of every legitimate means of information—the newspapers, the schoolhouse organ, school newspapers, parent-teacher clubs, reports and monographs—in accordance with principles which are outlined in this volume.

SMITH, WALTER ROBINSON. Constructive school discipline. New York, Cincinnati [etc.], American book company [1924] 275 p. 12°. (American education series. G. D. Strayer, general editor.)

Suggests ways and means of student control that will harmonize with social trends in other phases of life and provide a useful training for citizenship in a democratic society. The author asserts that the new socialized form of school discipline may be made a more vital element in moral education than could the earlier autocratic domination, which has now broken down in all phases of life.

WHEELER, JOSEPH L. The library and the community. Increased book service through library publicity based on community studies. Chicago, American library association, 1924. 417 p. illus., diagrs. 8°.

Library workers should devote a larger share of their attention to reaching the public which the library is designed to serve—less time in merely preparing books for use and more time in actually getting them read. The librarian of to-morrow will base his pride on the aid his library can give in making the use of books a means of positive educational and cultural advance. These ideals are accepted by the author of this book, which presents principles and methods for use by librarians in applying their service to those points where it is particularly needed in their respective communities. The volume deals with the community background of the library (including schools), public opinion, and the library, and especially the technique of library publicity.

Many Private Schools in Cities Are Deficient in Health Provisions

Excellent Equipment in Some Private Institutions. Others Would be Serious Menace but for Watchfulness of Parents. Public Schools are in General Far Superior in Provision for Health and Enjoy Better Supervision

By JAMES F. ROGERS

Chief Division of Physical Education and School Hygiene, Bureau of Education

THERE are private schools and private schools. Many of them are well housed and well conducted, but in this article we refer especially to many schools which spring up in cities where overcrowding in the public schools or the preponderance of foreign-born children or some other supposed fault has alienated the parents from public schools. In not a few of these private schools are to be found pupils, subnormal or otherwise exceptional, for whom no suitable provisions have been made in the public schools.

No Supervision by Special School Health Agencies

No matter what their origin or by whom patronized, a very considerable proportion of the private schools are far from ideal from a health-affording point of view. Frequently the sanitary conditions are much worse than in the public schools of the same community. School authorities, as a rule, are none too careful in matters of school health. However careless or ignorant the director of a private school may be, he is unfortunately outside the pale of inspection and unassisted by special school-health agencies.

Schools are often held in private houses and in rooms unsuitable in size for the number of pupils. Classes may be held in bedrooms which have been too recently vacated to be aired. Open gas stoves may serve as heaters. The temperature of the room is difficult to control and is often far from what it should be.

There may be few rooms, and the pupils being of a variety of ages the seats and desks (if the latter are provided) are unfitted in size for many of them. Pencils and other tools are often used in common and there are no sanitary drinking facilities.

Intelligent Home Care the Saving Element

Opportunity for play in the open air is frequently lacking, and the physical exercises that are carried out are done in overheated rooms. Medical inspection of either pupils or plant is almost unheard of. From the health standpoint, the school is saved to some extent by the fact

that the pupils come from homes where they are well cared for and where they are usually kept at home if they show signs of infectious disease. Nevertheless the conditions in many schools are a constant and unnecessary menace.

It is unfortunate that in many communities parents patronize private schools, not so much because the public schools are poor as because it seems beneath their dignity and pocketbook to send their children to public schools. If they would contribute the tuition to the public school and lend of their time and interest, it might easily be far superior to the private school. Moreover, the parents might find upon investigation that, from a health point of view at least, the public school is already superior; but many of them never visit the school at all.

Thoughtful Planning Would Produce Good Results

If the private school must exist—and many of these schools fill a real need—it is unfortunate that all can not make an effort to approximate the excellence in sanitation and hygiene which is reached by the best of them. They are untrammelled in aim, and by a little thoughtful planning as to matters physical they could put things on a far healthier foundation than exists at present.

Having no supervising health authority, they might well have on their staff a physician who knows something of sanitation and the teaching of health, and with a slight expense for his counsel they could at least make the best of the conditions which exist. Certainly the school, which in this day of agitation for the desirability not only of freedom from sickness but the development of what health is possible for a pupil, should find that it pays to be, above all things, hygienic.



To train young women as household assistants the home economics department of the Denver (Colo.) public schools, cooperating with the Young Women's Christian Association, will offer a six or eight weeks course of intensive training for practical work in the home. Housekeepers of Denver promise the students positions immediately upon completion of the course.

To Equalize Opportunities for Home Reading

At a recent conference on home education which was called by the United States Commissioner of Education, librarians, extension directors of State universities, and leaders in parent-teacher associations discussed at length the facilities for giving people greater opportunities for reading.

As a result of this conference a committee of seven has been appointed by the United States Commissioner of Education to study the situation in the United States. This committee consists of Prof. Charles G. Maphis, University of Virginia, and Prof. Richard R. Price, University of Minnesota, representing the National University Extension Association; Mr. L. L. Dickinson and Mr. Judson T. Jennings, representing the American Library Association; Mrs. A. H. Reeve and Mrs. Drury W. Cooper, representing the National Congress of Parents and Teachers, and Dr. Jno. J. Tigert, representing the Bureau of Education, as chairman.

The agencies represented in this committee are already at work on some phase of this problem of home education, and it is expected that means will be developed whereby a nation-wide plan of cooperation may be outlined and put into operation, so that in every State there may be equal opportunities for all to enrich their lives when school days are over, through the use of books and periodicals. It is also hoped that public education may be more equally distributed throughout the States.—Ellen C. Lombard.



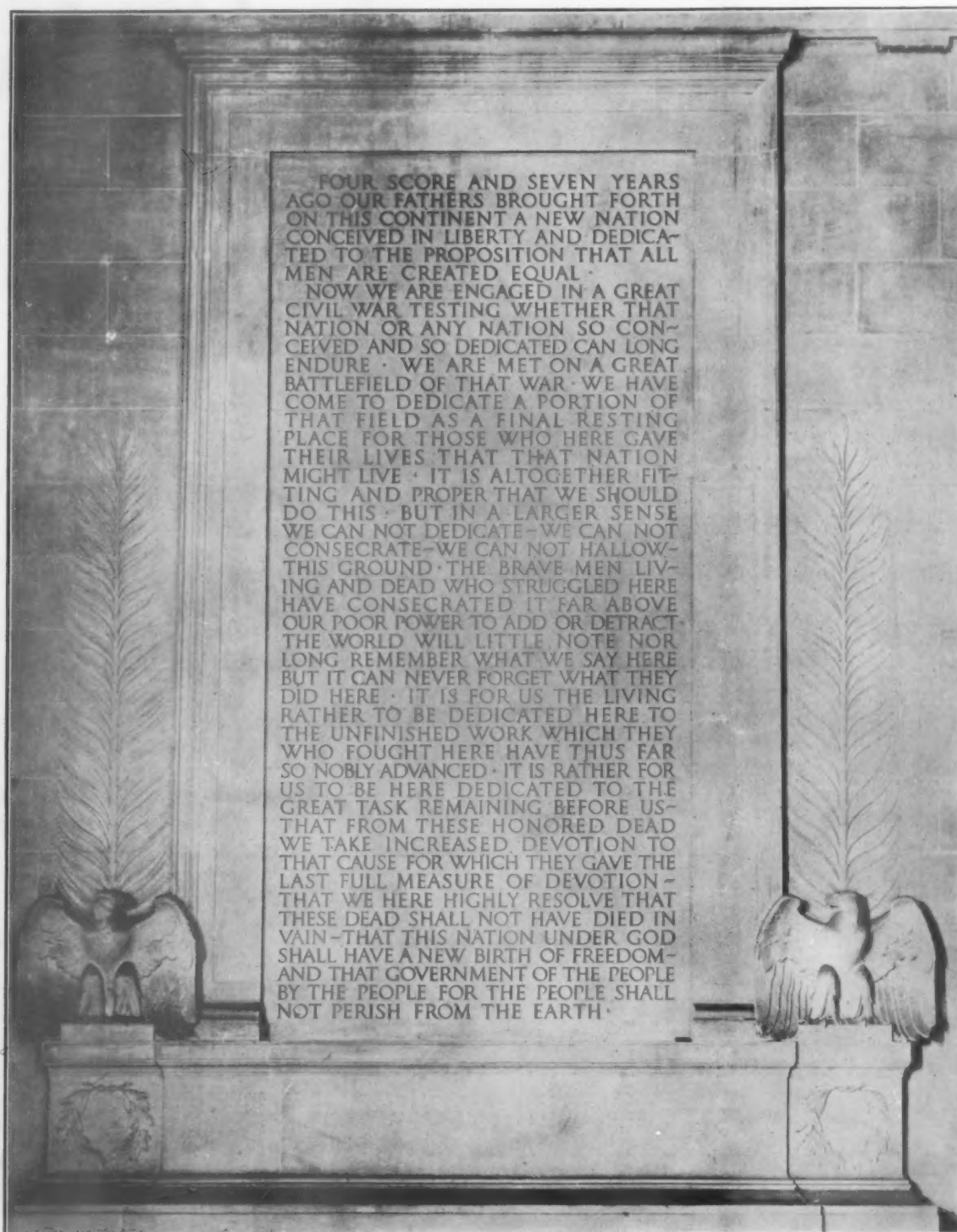
Rumanians Enthusiastic Over Agricultural Instruction

Rumania, with a population of a little more than 13,000,000, is supporting 59 schools of agriculture and 15 schools of household economics. For agricultural instruction alone, 31,600,000 lei, or \$1,637,306, was expended in the year 1923, according to a recent report from Mr. Ely E. Palmer, American consul at Bucharest. In each of the four grades of agricultural schools students are given actual practice on school farms. The advanced schools confer the degree of "agronomical engineer" upon students who complete the four-year course. Graduates of these schools are qualified for teaching agriculture in the primary and secondary schools, and are also eligible for appointment as officials in the Ministry of Agriculture.

THE most striking manifestations of progress in modern civilization are found in the extensions of educational facilities to the masses of the people; in the establishment of scientific, physical, mechanical, and all polytechnic schools, and in the discoveries made and results wrought by educated and enlightened industries. . . .

Modern progress is chiefly, if not entirely, found not in the advancement of what are called the learned professions but in the education and elevation of the masses; in the discoveries and appliances of the physical sciences; in the establishment of schools of science; and in the promotion, enlargement, and results of all departments of industries. . . .

Education is the one subject for which no people ever yet paid too much. Indeed, the more they pay, the richer they become. Nothing is so costly as ignorance, and nothing so cheap as knowledge. Even under old civilizations the States and people who provided the greatest educational dissemination and advantages were always the most wealthy, the most powerful, the most feared and respected by others, and the most secure in every right of person and property among themselves. And this truth will be tenfold more manifest in the future than it has been in the past. The very right arm of all future national power will rest in the education of the people.—*Benjamin Harvey Hill.*



FOUR SCORE AND SEVEN YEARS
AGO OUR FATHERS BROUGHT FORTH
ON THIS CONTINENT A NEW NATION
CONCEIVED IN LIBERTY AND DEDICA-
TED TO THE PROPOSITION THAT ALL
MEN ARE CREATED EQUAL.

NOW WE ARE ENGAGED IN A GREAT
CIVIL WAR TESTING WHETHER THAT
NATION OR ANY NATION SO CON-
CEIVED AND SO DEDICATED CAN LONG
ENDURE. WE ARE MET ON A GREAT
BATTLEFIELD OF THAT WAR. WE HAVE
COME TO DEDICATE A PORTION OF
THAT FIELD AS A FINAL RESTING
PLACE FOR THOSE WHO HERE GAVE
THEIR LIVES THAT THAT NATION
MIGHT LIVE. IT IS ALTOGETHER FIT-
TING AND PROPER THAT WE SHOULD
DO THIS. BUT IN A LARGER SENSE
WE CAN NOT DEDICATE—WE CAN NOT
CONSECRATE—WE CAN NOT HALLOW—
THIS GROUND. THE BRAVE MEN LIV-
ING AND DEAD WHO STRUGGLED HERE
HAVE CONSECRATED IT FAR ABOVE
OUR POOR POWER TO ADD OR DETRACT.
THE WORLD WILL LITTLE NOTE NOR
LONG REMEMBER WHAT WE SAY HERE
BUT IT CAN NEVER FORGET WHAT THEY
DID HERE. IT IS FOR US THE LIVING
RATHER TO BE DEDICATED HERE TO
THE UNFINISHED WORK WHICH THEY
WHO FOUGHT HERE HAVE THUS FAR
SO NOBLY ADVANCED. IT IS RATHER FOR
US TO BE HERE DEDICATED TO THE
GREAT TASK REMAINING BEFORE US—
THAT FROM THESE HONORED DEAD
WE TAKE INCREASED DEVOTION TO
THAT CAUSE FOR WHICH THEY GAVE THE
LAST FULL MEASURE OF DEVOTION—
THAT WE HERE HIGHLY RESOLVE THAT
THESE DEAD SHALL NOT HAVE DIED IN
VAIN—THAT THIS NATION UNDER GOD
SHALL HAVE A NEW BIRTH OF FREEDOM—
AND THAT GOVERNMENT OF THE PEOPLE
BY THE PEOPLE FOR THE PEOPLE SHALL
NOT PERISH FROM THE EARTH.

LINCOLN'S GETTYSBURG SPEECH

(IN LINCOLN MEMORIAL, WASHINGTON)

APPROPRIATE FOR USE IN OBSERVING PATRIOTISM DAY